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10/733,160	12/10/2003	Robert L. Doubler	75028-307910	5934

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MINNEAPOLIS, MN 55402-3901

EXAMINER

FERGUSON, MICHAEL P

ART UNIT	PAPER NUMBER
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3679

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/733,160

Applicant(s)

DOUBLER ET AL.

Examiner

Michael P. Ferguson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15, 17-19 and 21-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5, 7-10, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 11-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 11 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>02/27/06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

1. The use of the trademarks MORSE, BROWN&SHARPE, JARNO, AMERICAN NATIONAL STANDARD MACHINE, JACOBS, and BRITISH STANDARD have been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4, 11, 12, 15, 17-19 and 21-26 are rejected under 35 U.S.C. 102(e) as being anticipated by Krüger et al. (US 6,712,544).

As to claim 1, Krüger et al. disclose a linear engaging headless fastener system for securing an object **3** to a machine component **2,4**, the fastener system comprising:

a body member **7** having an outer surface positioned about a central axis, the body member having a first end including a cavity, the cavity having an engaging

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surface, the engaging surface tapering inwardly from about the first end and extending toward a second end, the second end defining a clamping surface **A** (clamping surface **A** clamps against object **3**; thus defining a clamping surface; Figure 6 reprinted below with annotations) adapted to engage the object;

an expander member **14** having a first end, a second end, and an outer surface positioned about a central axis, the outer surface tapering outwardly from the first end and extending toward the second end, the first end being insertable into the body member cavity; and

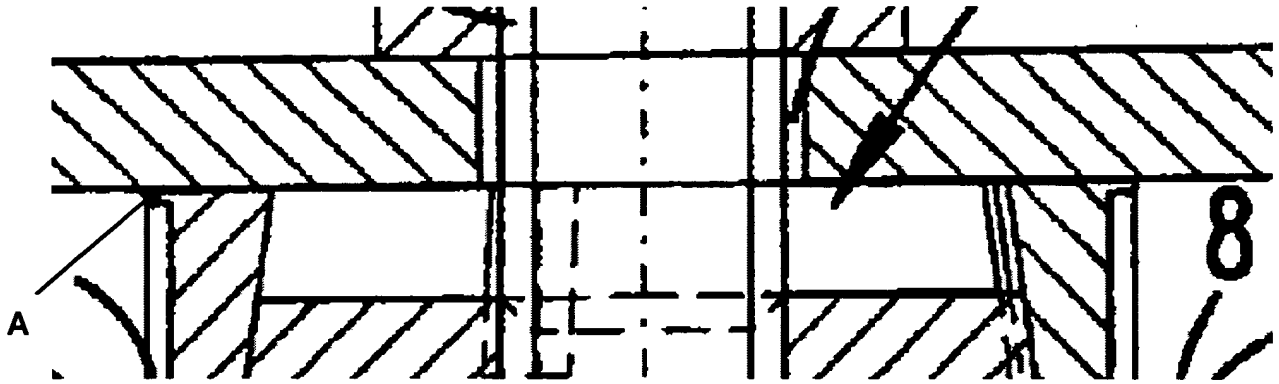
a gripping surface defining an aperture **4** in the machine component **4**,

wherein the outer surface of the expander member is constructed and arranged for coaxial alignment and engagement with respect to the engaging surface of the body member, the expander member being linearly traversable with respect to the engaging surface of the body member between first release position and second engaged position, wherein the engaged position results in the tapered surfaces circumferentially expanding the body member, and wherein the release position results in circumferential contraction of the body member;

wherein the body member outer surface and the gripping surface are configured and positionable relative to each other to from a compressive contact with each other to linearly shift relative to each other under the compressive contact to cause an increased compression between the clamping surface and the object when the body member is circumferentially expanded from an unloaded state (body member **7** is capable of

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linearly shifting relative to gripping surface 4 under compressive contact due tightening bolt 15; Figures 2 and 6).



As to claim 2, Krüger et al. disclose a system including means 16 projecting radially from the outer surface of the body member outer surface for engagement with the inner surface of the aperture 4 locking the body member 7 in a predetermined position (Figure 1).

As to claim 3, Krüger et al. disclose a system wherein the radially projecting means includes a outwardly and circumferentially extending rib 16, each rib including a first ramp surface to facilitate coaxially aligned linear movement of the body member 7 in relation to the inner gripping surface the aperture 7 provide a secondary clamping force upon engagement of the expander member 14 (Figure 1).

As to claim 4, Krüger et al. disclose a system wherein the circumferentially extending rib 16 includes a second ramp surface to facilitate coaxially aligned linear insertion the body member 7 into the inner gripping surface of the aperture 4 (Figure 1).

As to claim 11, Krüger et al. disclose a system wherein the clamping surface consists of a flat point (flat surface; Figure 1).

As to claim 12, Krüger et al. disclose a system wherein the body member **7** is constructed of metal (metal cross-section; Figure 1).

As to claim 15, Krüger et al. disclose a system wherein the engaging surface within the cavity is a self-locking taper.

As to claim 16, Krüger et al. disclose a system wherein the self-locking taper is selected.

As to claim 17, Krüger et al. disclose a system wherein the expander member **14** includes an internal bore extending inwardly from the first end of the expander member along a longitudinal centerline, wherein the internal bore is constructed and arranged for gripping and placing a tensile load on the expander member prior to linear traversal the expansion member into the disengaged position with respect to the body member **7** (Figure 1).

As to claim 18, Krüger et al. disclose a system wherein the internal bore includes internal threads **21** (Figure 1).

As to claim 19, Krüger et al. disclose a system wherein the outer surface of the expander member **14** includes a self-locking taper.

As to claim 20, Krüger et al. disclose a system wherein the self-locking taper is selected.

As to claim 21, Krüger et al. disclose a system wherein the outer surface of the expander member **14** and the inner engaging surface of the body member **7** are constructed and arranged to maintain an axially aligned interfitting relationship in the release position (Figure 1).

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As to claim 22, Krüger et al. disclose a fastener, comprising:

a body member **7** defining a longitudinal axis and comprising a clamping end **A** (clamping surface **A** clamps against object **3**; thus defining a clamping surface) adapted to engage an object **3** to be fastened, and an expandable portion **16** radially expandable relative to the longitudinal axis, the expandable portion having an inner surface defining a cavity in the body member and an outer surface;

an expander member **14** having an outer surface and sized to be partially positionable inside the cavity of the body member; and

a machine component **2,4** comprising a gripping surface defining a cavity **4** sized to accommodate a portion of the expandable portion of the body member and to engage the outer surface of the body member,

wherein the outer surface of the expander member and the inner surface of the expandable portion of the body member are configured to cooperate to radially expand the expandable portion when the expander member axially slides along the longitudinal axis, and wherein the outer surface of the expandable portion of the body member and the gripping surface are configured to cooperate to push the body member along the longitudinal axis relative to the gripping surface, thereby compressively engaging the clamping end with the object to be fastened as the expandable portion radially expands (body member **7** is capable of linearly shifting relative to gripping surface **4** under compressive contact due tightening bolt **15**; Figures 1,2 and 6).

As to claim 23, Krüger et al. disclose a fastener wherein the machinery component **2,4** comprises a portion (bolt **15**) adapted to support the object **3** to be fastened against the clamping end **A** (Figure 6).

As to claim 24, Krüger et al. disclose a fastener wherein both of the outer surface of the expander member **14** and the inner surface of the expandable portion **16** of the body member **7** has a portion at an angle from the longitudinal axis and adapted to remain in contact with the other one of the outer surface of the expander member and the inner surface of the expandable portion of the body member during the longitudinal advancement of the expander member (Figure 6).

As to claim 25, Krüger et al. disclose a fastener wherein the expandable portion **16** of the body member **7** has a portion at an angle from the longitudinal axis and adapted to remain in contact with the gripping surface **4** during the radial expansion of the expandable portion of the body member (Figure 6).

As to claim 26, Krüger et al. disclose a fastener wherein the outer surface of the expander member **14** and the inner surface of the expandable portion **16** of the body member **7** form a self-locking taper (Figures 2 and 6).

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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5. Claims 6, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krüger et al.

As to claim 6, Krüger et al. fail to disclose a system wherein the radially projecting means define ribs 16.

Krüger et al. fail to disclose a system wherein the radially projecting means define a knurled surface. The applicant is reminded that a change in the shape of a prior art device is a design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Krüger et al. to have radially projecting means defining a knurled surface as such practice is a design consideration within the skill of the art.

As to claim 13 and 14, Krüger et al. disclose a system wherein the body member 7 is constructed of metal.

Krüger et al. fail to disclose a system wherein the body member is constructed of polymeric material or rubber. The applicant is reminded that the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960).

Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify a system as disclosed by Krüger et al. to have a body member constructed of polymeric material or rubber as such practice is a design consideration within the skill of the art.

***Allowable Subject Matter***

6. Claims 5, 7-10, 27 and 28 allowed.

***Response to Arguments***

7. Applicant's arguments filed October 24, 2005 have been fully considered but they are not persuasive.

As to claims 1 and 22, Attorney argues that:

Krüger et al. do not disclose a fastener system wherein the body member outer surface and the gripping surface are configured and positionable relative to each other to from a compressive contact with each other *to linearly shift relative to each other under the compressive contact to cause an increased compression between the clamping surface and the object when the body member is circumferentially expanded from an unloaded state.*

Examiner disagrees. As to claims 1 and 22, Krüger et al. disclose a fastener system wherein the body member **7** outer surface and the gripping surface **4** are configured and positionable relative to each other to from a compressive contact with each other to linearly shift relative to each other under the compressive contact to cause an increased compression between the clamping surface **A** and the object **3** when the body member is circumferentially expanded from an unloaded state (body member **7** is capable of linearly shifting relative to gripping surface **4** under compressive contact due tightening bolt **15**; Figures 2 and 6).

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Ferguson whose telephone number is (571)272-7081. The examiner can normally be reached on M-F (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571)272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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